09/779,086

(FILE 'HOME' ENTERED AT 14:53:56 ON 11 FEB 2004)

FILE 'REGISTRY' ENTERED AT 14:54:28 ON 11 FEB 2004
E (PROBUCOL)/CN
E PROBUCOL/CN
L1 1 S E3
E CARBOPLATIN/CN
L2 1 S E3
L3 0 S L1 AND L2

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 14:55:40 ON 11 FEB 2004
L4 5400 S L1
L5 25322 S L2
L6 8 S L4 AND L5
L7 8 DUP REM L6 (0 DUPLICATES REMOVED)
L8 185 S (CHINERY, R? OR CHINERY R?)/AU,IN
L9 826 S (BEAUCHAMP, R? OR BEAUCHAMP R?)/AU,IN
L10 1511 S (COFFEY, R? OR COFFEY R?)/AU,IN
L11 316 S (MEDFORD, R? OR MEDFORD R?)/AU,IN
L12 149 S (WADZINSKI, B? OR WADZINSKI B?)/AU,IN
L13 1 S L8 AND L9 AND L10 AND L11 AND L12
L14 2880 S L8 OR L9 OR L10 OR L11 OR L12
L15 5 S L14 AND (ATHEROGENIC?)
L16 3 DUP REM L15 (2 DUPLICATES REMOVED)
L17 31776 S L14 OR (ATHEROGENIC?)
L18 829 S (ANTITUMOR? OR ANTITUMOUR? OR ANTI-TUMOR? OR ANTI-TUMOUR? OR
L19 5 S L4 AND L18
L20 5 DUP REM L19 (0 DUPLICATES REMOVED)
L21 2 S L5 AND L18
L22 1 S L21 NOT L20
L23 280671 S (ANTI-OXIDANT? OR ANTIOXIDANT?)
L24 97 S L23 (5A)L18
L25 4090 S (ANTI-OXIDANT? OR ANTIOXIDANT? OR PROBUCOL?)(5A)(ANTITUMOR? O
L26 632 S L25 AND (COMPOSITION? OR PHARMACEUTICAL? OR COMBINATION?)
L27 138 S L26 AND (CYTOTOXIC? OR TOXIC?)
L28 1 S L27 AND (THERAP?)(2A)(INDEX)
L29 1676774 S (CANCER? OR TUMOUR? OR TUMOR? OR CHEMOTHER?)/TI
L30 74 S L27 AND L29
L31 55 DUP REM L30 (19 DUPLICATES REMOVED)
L32 4 S (ENHANC? OR DECREAS? OR INCREASE?)(3A)(TOXIC?) AND L30
L33 3 DUP REM L32 (1 DUPLICATE REMOVED)
L34 6 S (ANTI-OXIDANT? OR ANTI-OXIDANT?)(5A)(CHEMOTHERAP?)
L35 3 DUP REM L34 (3 DUPLICATES REMOVED)
L36 13 S (ANTI-OXIDANT? OR ANTI-OXIDANT?)(15A)(CHEMOTHERAP?)
L37 7 DUP REM L36 (6 DUPLICATES REMOVED)
L38 76 S (RIPOLL, E? OR RIPOLL E?)/AU,IN
L39 3 S (VITAMIN)/TI AND L38

FILE 'STNGUIDE' ENTERED AT 15:11:33 ON 11 FEB 2004

FILE 'CAPLUS, BIOSIS, MEDLINE' ENTERED AT 15:12:39 ON 11 FEB 2004

FILE 'STNGUIDE' ENTERED AT 15:12:39 ON 11 FEB 2004

FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:13:44 ON 11 FEB 2004
L40 0 S (YAUNAGA, ? OR YAUNAGA ?)/AU,IN
L41 0 S (YAUNAGA, ? OR YAUNAGA ?)/AU,IN
L42 0 S YAUNAGA
L43 4122 S (YASUNAGA, ? OR YASUNAGA ?)/AU,IN

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L44          88 S (CANCER)/TI AND L43
L45           5 S L44 AND (THERAPY)/TI
L46          15 S (VITAMIN)(2A)(E) AND L43
L47           5 DUP REM L46 (10 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 15:19:17 ON 11 FEB 2004

     FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:20:00 ON 11
     FEB 2004
L48          63 S (SZCZEPANSAK, I? OR SZCZEPANSKA I?)/AU,IN
L49           4 S L48 AND (AGENTS)/TI
L50           1 DUP REM L49 (3 DUPLICATES REMOVED)

     FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:22:42 ON 11
     FEB 2004
L51         114 S (CLOOS, J? OR CLOOS J?)/AU,IN
L52           4 S L51 AND (ANTIOXIDANT)/TI
L53           1 DUP REM L52 (3 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 15:23:34 ON 11 FEB 2004
L54           0 S (THERAPEUTIC)(3A)(INDEX)(5A)(INCREAS?)

     FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:25:06 ON 11
     FEB 2004
L55        1132 S (THERAPEUTIC)(3A)(INDEX)(5A)(INCREAS?)
L56         628 S L55 AND (TOXICITY OR CYTOTOXICITY)
L57         173 S L55 (10A)(TOXICITY OR CYTOTOXICITY)
L58         106 S L55 (5A)(TOXICITY OR CYTOTOXICITY)

     FILE 'STNGUIDE' ENTERED AT 15:28:53 ON 11 FEB 2004

     FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:29:31 ON 11
     FEB 2004
L59           4 S L58 AND PROBUCOL?
L60           2 DUP REM L59 (2 DUPLICATES REMOVED)
L61       24261 S (ENHANC? OR INCREAS?)(2A)(CYTOXICIT? OR TOXICIT?)
L62          80 S L55 AND L61
L63          44 S L62 AND (ANTITUMOR? OR ANTI-TUMOUR? OR ANTI-TUMOR? OR CANCER
L64          23 DUP REM L63 (21 DUPLICATES REMOVED)
L65           1 S L64 AND (ANTIOXIDANT? OR ANTI-OXIDANT? OR ASCORBAT?)
L66       21237 S (FREE)(2A)(RADICAL?)(2A)(SCAVENGER?)
L67         217 S L66 AND CHEMOTHERAP?
L68         112 S L67 AND TOXIC?
L69          32 S L66 (15A) CHEMOTHERAP?
L70          16 S L69 AND TOXIC?
L71           6 DUP REM L70 (10 DUPLICATES REMOVED)
L72       76971 S (ANTIOXIDANT?)/TI
L73        1306 S (CANCER? OR CHEMOTHERAP?)/TI AND L72
L74          26 S L73 AND (CYTOTOXIC? OR TOXIC?)/TI
L75          13 DUP REM L74 (13 DUPLICATES REMOVED)

     FILE 'STNGUIDE' ENTERED AT 15:46:22 ON 11 FEB 2004

     FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:46:59 ON 11
     FEB 2004

     FILE 'STNGUIDE' ENTERED AT 15:48:29 ON 11 FEB 2004

     FILE 'CAPLUS, EMBASE, BIOSIS, MEDLINE, WPIDS' ENTERED AT 15:52:20 ON 11
     FEB 2004

     FILE 'STNGUIDE' ENTERED AT 15:52:21 ON 11 FEB 2004
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ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 1988:434555 CAPLUS
DN 109:34555
ED Entered STN: 05 Aug 1988
TI Mechanisms of synergistic **toxicity** of the radioprotective agent, WR2721, and 6-hydroxydopamine
AU Schor, Nina Felice
CS Dep. Neurol., Child. Hosp., Pittsburgh, PA, 15213, USA
SO Biochemical Pharmacology (1988), 37(9), 1751-62
CODEN: BCPCA6; ISSN: 0006-2952
DT Journal
LA English
CC 8-6 (Radiation Biochemistry)
AB WR 2721 is a prodrug for a radioprotective thiol which has been proposed for adjunctive use as a **free radical scavenger** in cancer **chemotherapy**. When used adjunctively with O radical-generating chemotherapeutic agents in mice, however, WR 2721 produces synergistic **toxicity** rather than attenuation of the **toxic** effects of such agents. The present paper discusses potential mechanisms for such synergistic **toxicity**. The pathway for glutathione synthesis appeared to be inactivated in mice treated with WR 2721. The disulfide metabolite of WR 2721 was a potent inactivator of γ-glutamylcysteine synthetase, the rate-limiting enzyme in glutathione synthesis. The inactivation of the enzyme by this compound was similar to that reported for cystamine, a compound known to form a mixed disulfide with a cysteine residue near the glutamic acid binding site of the enzyme. O radicals not only inactivated the synthetase, as well, but hastened the oxidation of the free thiol metabolite of WF 2721 to its corresponding disulfide.
ST WR 2721 hydroxydopamine **toxicity** synergism
IT Liver, composition
(glutathione of, hydroxydopamine and WR2721 effect on, **toxicity** in relation to)
IT 58205-87-1
RL: FORM (Formation, nonpreparative)
(formation of, from mercaptoethyldiaminopropane oxidation, hydroxydopamine and WR2721 induction of, synergistic mechanism of)
IT 56-86-0, Glutamic acid, biological studies
RL: BIOL (Biological study)
(glutamylcysteine synthetase of liver inactivation by mercaptoethyldiaminopropane disulfide response to)
IT 616-91-1, N-Acetylcysteine
RL: BIOL (Biological study)
(glutathione of liver response to, after WR2721 treatment)
IT 7782-44-7D, radicals, biological studies
RL: BIOL (Biological study)
(hydroxydopamine and WR2721 synergistic **toxicity** in relation to)
IT 9001-48-3
RL: BIOL (Biological study)
(hydroxydopamine effect on)
IT 7439-95-4, Magnesium, biological studies 9023-64-7, γ-Glutamylcysteine synthetase
RL: BIOL (Biological study)
(of liver, WR2721 and hydroxydopamine effect on, **toxicity** in relation to)
IT 70-18-8, Glutathione, biological studies
RL: BIOL (Biological study)
(of liver, hydroxydopamine and WR2721 effect on, **toxicity** in relation to)
IT 31098-42-7
RL: RCT (Reactant); RACT (Reactant or reagent)

(oxidation of, hydroxydopamine and WR2721 induction of, synergistic mechanisms of)

IT 1199-18-4, 6-Hydroxydopamine
RL: PRP (Properties)
(**toxicity** of, WR2721 synergism with, mechanisms of)

IT 20537-88-6, WR2721
RL: PRP (Properties)
(**toxicity** of, hydroxydopamine synergism with, mechanisms of)

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L75 ANSWER 13 OF 13 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 5
AN 1990:526239 BIOSIS
DN PREV199039126737; BR39:126737
TI **TOXIC** SIDE EFFECTS OF ANTITUMOR **CHEMOTHERAPY** WAYS TO
PREVENT THEM AND THE ROLE OF OXYGEN RADICALS AND **ANTIOXIDANTS**.
AU MALEC J [Reprint author]
CS UL MAKLAKIEWICZA 9 M 54, 02-642 WARSZAWA
SO Wiadomosci Lekarskie, (1989) Vol. 42, No. 19-21, pp. 1044-1051.
CODEN: WILEAR. ISSN: 0043-5147.
DT Article
FS BR
LA POLISH
ED Entered STN: 20 Nov 1990
Last Updated on STN: 20 Nov 1990
CC Biochemistry - Gases 10012
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Vitamins 10063
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Lipids 10066
Biochemistry studies - Sterols and steroids 10067
Pathology - Therapy 12512
Metabolism - Energy and respiratory metabolism 13003
Metabolism - Carbohydrates 13004
Metabolism - Lipids 13006
Metabolism - Sterols and steroids 13008
Metabolism - Proteins, peptides and amino acids 13012
Metabolism - Vitamins, general 13015
Digestive system - Physiology and biochemistry 14004
Blood - Blood and lymph studies 15002
Pharmacology - Drug metabolism and metabolic stimulators 22003
Pharmacology - Clinical pharmacology 22005
Toxicology - Pharmacology 22504
Neoplasms - Therapeutic agents and therapy 24008
Development and Embryology - Morphogenesis 25508
IT Major Concepts
Blood and Lymphatics (Transport and Circulation); Development;
Digestive System (Ingestion and Assimilation); Metabolism; Oncology
(Human Medicine, Medical Sciences); Pharmacology; Toxicology
IT Miscellaneous Descriptors
REVIEW HUMAN OXYGEN METABOLISM HEMOPOIESIS NUCLEOTIDE LIPID HYDROGEN
PEROXIDE ALBUMIN URIC ACID CHOLESTEROL SYNTHESIS VITAMINS
ANTINEOPLASTIC PHARMACOTHERAPY
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 7782-44-7 (OXYGEN)
7722-84-1 (HYDROGEN PEROXIDE)
69-93-2 (URIC ACID)
57-88-5 (CHOLESTEROL)

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L75 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 4
AN 1990:452198 CAPLUS
DN 113:52198
ED Entered STN: 17 Aug 1990
TI Effect of **antioxidants** on the mitochondrial activity and **toxicity** of the **cancer** drug methylglyoxal bis(guanylhydrazone) in yeast and mammalian cells
AU Cheng, L. L.; Collier, D. C.; Wilkie, D.
CS Dep. Biol., Univ. Coll. London, London, WC1E 6BT, UK
SO Cancer Letters (Shannon, Ireland) (1990), 51(3), 213-20
CODEN: CALEDQ; ISSN: 0304-3835
DT Journal
LA English
CC 1-6 (Pharmacology)
AB Mitochondria of yeast cells were primary targets of methylglyoxal bis(guanylhydrazone) (MGBG) from the following criteria: (1) selective inhibition of growth of cells utilizing a nonfermentable energy source, (2) inhibition of mitochrondrial protein synthesis compared with cytosolic protein synthesis, and (3) selective mutagenesis of the mitochondrial genome compared with nuclear mutagenesis. Evidence of primary antimitochondrial activity of MGBC in mammalian cells was provided by greater potency of the drug in guinea pig keratinocyte cultures utilizing glutamine as carbon and energy source compared with fermentable glucose. Cell death was used as a measure of drug toxicity in both yeast and mammalian systems. The antioxidants, glutathione, vitamin E, and vitamin C, reversed toxicity and antimitochondrial activity to a large extent implying that toxic free radical metabolites of the drug are of significance in cellular activity of MGBG.
ST methylglyoxal guanylhydrazone antioxidant mitochondria toxicity antitumor
IT Antioxidants
(methylglyoxal bisguanylhydrazone antimitochondrial activity and cell toxicity response to, antitumor activity in relation to)
IT Neoplasm inhibitors
(methylglyoxal bisguanylhydrazone as, mitochondrial toxicity in relation to)
IT Mitochondria
(methylglyoxal bisguanylhydrazone toxicity to, antioxidant effect on, antitumor activity in relation to)
IT 459-86-9
RL: BIOL (Biological study)
(antimitochondrial activity and cell toxicity of, antioxidants effects on, antitumor activity in relation to)
IT 50-81-7, L-Ascorbic acid, biological studies 70-18-8, Glutathione, biological studies 2074-53-5
RL: BIOL (Biological study)
(methylglyoxal bisguanylhydrazone antimitochondrial activity and cell toxicity response to, antitumor activity in relation to)

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L75 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 1997:712495 CAPLUS
DN 128:43496
TI **Antioxidants** enhance the **cytotoxicity** of **chemotherapeutic** agents in colorectal **cancer**: a p53-independent induction of p21WAF1/CIP1 via C/EBPβ
AU Chinery, Rebecca; Brockman, Jeffrey A.; Peeler, Mark O.; Shyr, Yu; Beauchamp, R. Daniel; Coffey, Robert J.
CS Dep. Cell Biol., Vanderbilt Univ. Med. Cent., Nashville, TN, 37232, USA
SO Nature Medicine (New York) (1997), 3(11), 1233-1241
CODEN: NAMEFI; ISSN: 1078-8956
PB Nature America
DT Journal
LA English
RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L75 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1997:705556 CAPLUS
DN 127:354976
ED Entered STN: 08 Nov 1997
TI Free radicals and **antioxidants** in **chemotherapy**-induced **toxicity**
AU Weijl, N. I.; Cleton, F. J.; Osanto, S.
CS Department of Clinical Oncology, Leiden University Medical Center, Leiden, 2300 RC, Neth.
SO Cancer Treatment Reviews (1997), 23(4), 209-240
CODEN: CTREDJ; ISSN: 0305-7372
PB Saunders
DT Journal; General Review
LA English
CC 1-0 (Pharmacology)
AB A review, with 264 refs. Clin. important side effects of various cytostatic drugs that seem to result from chemotherapy-induced formation of free radicals, intervention studies in which antioxidative agents were administered during chemotherapy in order to reduce the oxidative stress-induced organ damage, and the implications for the clin. outcome, particularly the antitumor response, are discussed.
ST review antitumor chemotherapy toxicity radical antioxidant
IT Toxicity
(drug; free radicals and antioxidants in chemotherapy-induced toxicity)
IT Antioxidants
Antitumor agents
Chemotherapy
(free radicals and antioxidants in chemotherapy-induced toxicity)
IT Radicals, biological studies
Reactive oxygen species
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(free radicals and antioxidants in chemotherapy-induced toxicity)

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L39 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:532651 CAPLUS
DN 105:132651
ED Entered STN: 18 Oct 1986
TI **Vitamin** E enhances the chemotherapeutic effects of adriamycin on human prostatic carcinoma cells in vitro
AU **Ripoll, Emilia A. Perez**; Rama, Bhola N.; Webber, Mukta M.
CS Health Sci. Cent., Univ. Colorado, Denver, CO, 80262, USA
SO Journal of Urology (Hagerstown, MD, United States) (1986), 136(2), 529-31
CODEN: JOURAA; ISSN: 0022-5347
DT Journal
LA English
CC 18-2 (Animal Nutrition)
Section cross-reference(s): 1
AB The role of vitamin E (d-α-tocopheryl succinate) [1406-18-4] in adjuvant chemotherapy with adriamycin (ADR) [23214-92-8] was assessed in DU-145 human prostatic carcinoma cells in culture. ADR produced a dose-dependent growth inhibition of DU-145 cells. The ID50 of DU-145 cells on the criteria: a) of clonal assay was 13 ng/mL and b) of cell count assay was 14 ng/mL. Vitamin E succinate also inhibited the growth of DU-145 human prostatic carcinoma cells in a dose-dependent manner: 4.4 μg/mL and 5.4 μg/mL, vitamin E succinate in the culture medium produced inhibition of growth to 50% of control (ID50) in the clonal and the cell count assays, resp. When ADR and vitamin E succinate were used in combination, both additive and synergistic effects were observed, depending on the concentration of vitamin E succinate used. Doses of vitamin E succinate greater than its ID50 had a synergistic effect while doses smaller than its ID50 had an additive effect. In either case, the presence of vitamin E succinate caused an enhancement of tumor cell cytotoxicity of adriamycin while decreasing its ID50. Equivalent concns. of Na succinate and EtOH used to dissolve vitamin E succinate did not have any effect on DU-145 cells. Thus, it is concluded that the effect of vitamin E succinate is due to vitamin E and not due to succinate or EtOH. These results suggest that vitamin E may have a role in the treatment of human prostatic cancer as an adjuvant agent to adriamycin.
ST vitamin E adriamycin prostate carcinoma
IT Prostate gland
(neoplasm, carcinoma, chemotherapy of, vitamin E enhancement of adriamycin in)
IT 1406-18-4
RL: BIOL (Biological study)
(adriamycin chemotherapy of prostate cancer enhancement by)
IT 23214-92-8
RL: BIOL (Biological study)
(prostate cancer treatment with, vitamin E enhancement of)

L47 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1984:150741 CAPLUS
DN 100:150741
ED Entered STN: 12 May 1984
TI Protective effect of **vitamin E** against immunosuppression induced by adriamycin, mitomycin C and 5-fluorouracil in mice
AU **Yasunaga, Toshimi**; Ohgaki, Kazuhisa; Inamoto, Takashi; Kan, Norimichi; Hikasa, Yorinori
CS Fac. Med., Kyoto Univ., Kyoto, Japan
SO Archiv fuer Japanische Chirurgie (1983), 52(5), 591-601
CODEN: NIGHAE; ISSN: 0003-9152
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 18
AB In rat lymphocytes, the inhibition of the mitogenic response by 3 anticancer agents (adriamycin [23214-92-8], mitomycin C [50-07-7], and 5-fluorouracil [51-21-8]) was reversed by dl-α-tocopherol [10191-41-0], indicating that the **vitamin E** protects against the immunosuppressive effects of the anticancer agents. Tocopherol also protected against the loss of spleen weight induced by the anticancer agents. Tocopherol enhanced the antitumor activity of the 3 drugs.
ST anticancer agent immunosuppression tocopherol; vitamin D anticancer agent immunosuppression; lymphocyte anticancer agent tocopherol
IT Neoplasm inhibitors
(immunosuppression from, **vitamin E** reversal of)
IT Lymphocyte
(mitogenesis of, neoplasm inhibitors inhibition of, **vitamin E** antagonism of)
IT Immunosuppressants
(neoplasm inhibitors as, **vitamin E** antagonism of)
IT Spleen
(neoplasm inhibitors effect on, **vitamin E** reversal of)
IT 10191-41-0
RL: BIOL (Biological study)
(immunosuppression from neoplasm inhibitors reversal by, neoplasm inhibition enhancement in)
IT 50-07-7 51-21-8 23214-92-8
RL: BIOL (Biological study)
(immunosuppression from, **vitamin E** reversal of, neoplasm inhibition in relation to)

L47 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 1984:628944 CAPLUS
DN 101:228944
ED Entered STN: 22 Dec 1984
TI **Vitamin E** and cancer treatment. Experimental study in mice
AU **Yasunaga, Toshimi**; Ohgaki, Kazuhisa; Inamoto, Takashi; Hikasa, Yorinori
CS Fac. Med., Kyoto Univ., Kyoto, Japan
SO Nippon Gan Chiryo Gakkaishi (1982), 17(8), 2074-83
CODEN: NGCJAK; ISSN: 0021-4671
DT Journal
LA Japanese
CC 18-2 (Animal Nutrition)
Section cross-reference(s): 14
AB **Vitamin E** [1406-18-4] enhanced cellular immunity in BALB/c mice assessed by the lymphoproliferative assay and Winn's tumor neutralization test. This immunopotentiating effect was manifested by the 14 daily i.p. injections of 5-20 IU/kg/day of **vitamin E**. In these conditions, the serum tocopherol level was elevated to .apprx.2-fold that of controls. The lymphoproliferative response was suppressed by doses >80 IU/kg/day. Meth-A tumor growth was significantly inhibited in BALB/c mice under the appropriate administration of **vitamin E**. **Vitamin E** was effective against the immunosuppression and the loss of spleen weight induced by adriamycin [23214-92-8], mitomycin C [50-07-7], or 5-fluorouracil [51-21-8]. From these results, **vitamin E** apparently stimulates helper and secondarily cytotoxic T lymphocytes, and clin. application for cancer treatment is warranted.
ST **vitamin E** immunity lymphocyte cancer
IT Neoplasm inhibitors
(**vitamin E** as)
IT Immunity
Immunosuppression
Lymphocyte
(**vitamin E** effect on, cancer in relation to)
IT 1406-18-4
RL: BIOL (Biological study)
(immunity response to, cancer in relation to)
IT 50-07-7 51-21-8 23214-92-8
RL: BIOL (Biological study)
(immunosuppression by, **vitamin E** decrease of)

L50 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 1988:142976 CAPLUS
DN 108:142976
ED Entered STN: 30 Apr 1988
TI Inhibition of leukocyte migration by cancer chemotherapeutic **agents** and its prevention by free radical scavengers and thiols
AU **Szczepanska, Izabella;** Kopec-Szlezak, Joanna; Malec, Janina
CS Dep. Physiopathol., Inst. Haematol., Warsaw, 00-957, Pol.
SO European Journal of Haematology (1988), 40(1), 69-74
CODEN: EJHAEC; ISSN: 0902-4441
DT Journal
LA English
CC 1-6 (Pharmacology)
AB The exposure of human blood in vitro to a range of concns. of adriblastin, hydroxyurea, methotrexate, 5-fluorouracil, 6-mercaptopurine, cytosine arabinoside, and nitrogen mustard reduced the leukocyte migration rate of all drug concns. tested. The reduction was dose-dependent. This effect was used to examine the protection by α-tocopherol, acetylsalicylic acid, and thiourea against drug-induced cytotoxicity. Tocopherol protected against the toxicity of all drugs, except nitrogen mustard. Acetylsalicylic acid protected the cells against adriblastin, cytosine arabinoside, hydroxyurea, and methotrexate toxicity. Thiourea prevented the toxic effect of adriblastin, fluorouracil, hydroxyurea, methotrexate, and nitrogen mustard.
ST antitumor leukocyte migration radical scavengers thiol
IT Thiols, biological studies
RL: BIOL (Biological study)
(leukocyte migration inhibition by neoplasm inhibitors response to)
IT Neoplasm inhibitors
(leukocyte migration inhibition by, radical scavengers and thiols effect on)
IT Leukocyte
(migration of, neoplasm inhibitors inhibition of, radical scavengers and thiols effect on)
IT Radicals, biological studies
RL: BIOL (Biological study)
(scavengers of, leukocyte migration inhibition by neoplasm inhibitors response to)
IT 50-78-2, Acetylsalicylic acid 58-95-7, α-Tocopherol acetate
62-56-6, Thiourea, biological studies
RL: BIOL (Biological study)
(leukocyte migration inhibition by neoplasm inhibitors response to)
IT 50-44-2, 6-Mercaptopurine 51-21-8, 5-Fluorouracil 55-86-7, Nitrogen mustard 59-05-2, Methotrexate 127-07-1, Hydroxyurea 147-94-4, Cytosine arabinoside 23214-92-8
RL: BIOL (Biological study)
(leukocyte migration inhibition by, radical scavengers and thiols effect on)

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L53 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 1996:114497 CAPLUS
DN 124:219633
ED Entered STN: 23 Feb 1996
TI Influence of the **antioxidant** N-acetylcysteine and its metabolites on damage induced by bleomycin in PM2 bacteriophage DNA
AU **Cloos, Jacqueline**; Gille, Johan J. P.; Steen, Ivar; Vincent, M.; Lafleur, M.; Retel, Jan; Snow, Gordon B.; Braakhuis, Boudewijn J, M.
CS Dep. Otolaryngology/Head Neck Surgery, Free University Hospital, Amsterdam, 1007 MB, Neth.
SO Carcinogenesis (1996), 17(2), 327-31
CODEN: CRNGDP; ISSN: 0143-3334
PB Oxford University Press
DT Journal
LA English
CC 1-6 (Pharmacology)
Section cross-reference(s): 14
AB Bleomycin is considered to be a useful model compound for studying environmental carcinogenesis, due to its broad spectrum of DNA damaging properties. In addition, bleomycin is a useful antitumor drug because of its cytotoxic properties. To investigate the influence of the antioxidant N-acetylcysteine and its metabolites glutathione and cysteine on bleomycin-induced DNA damage and more importantly to gain insight into the biol. relevance of such damage, PM2 DNA was exposed to Cu2+-bleomycin in the presence and absence of the thiols N-acetylcysteine, glutathione and cysteine. It was found that the presence of these thiols led to a considerable enhancement of bleomycin-induced single- and double-strand breaks and a concomitant decrease in the biol. activity of PM2 DNA in a dose-dependent way. A similar observation was made when ascorbic acid was used. Bleomycin showed no DNA damaging activity when PM2 DNA was pretreated with the strong Fe ion chelator desferal and its activity was strongly inhibited by the addition of Cu2+ ions or under hypoxic (N2) conditions. Cu2+-bleomycin under our conditions is not active by itself, but most probably after binding to DNA exchanges Cu2+ for Fe3+ bound to DNA. Fe3+-bleomycin is then reduced to Fe2+-bleomycin, a process potentiated by the added antioxidants, and subsequently activated by O2. The contribution to biol. inactivation of bleomycin alone or in the presence of ascorbic acid is only .apprx.15%. The contribution to lethality in the presence of thiols is higher. These results indicate that ascorbic acid only enhances the DNA damaging properties of bleomycin, whereas the thiol compds. in addition influence the type of DNA damage. The remainder of the biol. inactivation is probably caused by double damage, such as single-strand breaks with closely opposed alkali-labile sites or base damage.
ST antioxidant acetylcysteine bleomycin DNA damage ascorbate
IT Antioxidants
(effect of antioxidant N-acetylcysteine and its metabolites on damage induced by bleomycin in PM2 bacteriophage DNA)
IT Deoxyribonucleic acids
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(effect of antioxidant N-acetylcysteine and its metabolites on damage induced by bleomycin in PM2 bacteriophage DNA)
IT 50-81-7, Ascorbic acid, biological studies 52-90-4, Cysteine, biological studies 70-18-8, Glutathione, biological studies 616-91-1, N-Acetylcysteine 11056-06-7, Bleomycin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effect of antioxidant N-acetylcysteine and its metabolites on damage induced by bleomycin in PM2 bacteriophage DNA)

L58 ANSWER 2 OF 106 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:761237 CAPLUS
DN 138:313934
TI Evaluation of probucol as suppressor of ceftizoxime induced lipid peroxidation
AU Roy, Kunal; Saha, Achintya; De, Kakali; Sengupta, Chandana
CS Division of Medicinal & Pharmaceutical Chemistry Department of Pharmaceutical Technology, Jadavpur University, Calcutta, 700 032, India
SO Acta Poloniae Pharmaceutica (2002), 59(3), 231-234
CODEN: APPHAX; ISSN: 0001-6837
PB Polish Pharmaceutical Society
DT Journal
LA English
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 2 ab

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AB Considering drug induced lipid peroxidn., a possible mediator of drug induced toxicity and exploiting free radical scavenging action of probucol, which is a synthetic antioxidant of therapeutic interest, in vitro effects of the antioxidant on drug induced lipid peroxidn. have been studied to explore its possible potential in reducing drug induced toxicity. In the present study, ceftizoxime sodium, a third generation of cephalosporin, has been taken as the representative drug and goat whole blood has been used as the lipid source. The study revealed that probucol could suppress drug induced lipid peroxidn. to a significant extent. This provides scope for further study on probucol to evaluate its potential for reducing drug induced **toxicity** and **increasing therapeutic index** of drug by possible cotherapy.

WEST Search History

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Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
☐	L33	L32 not l28	6
☐	L32	L30 and (l1 or l2)	6
☐	L31	L30 and l1 and l2	0
☐	L30	L29 and l19	63
☐	L29	(l23 or l24 or l25 or l26 or l27)	16919
☐	L28	l23 and l24 and l25 and l26 and l27	2
☐	L27	(wadzinski)	88
☐	L26	(medford)	5092
☐	L25	(coffey)	5351
☐	L24	(beauchamp)	2923
☐	L23	(chinery)	3512
☐	L22	L20 and (antitumor$ or antitumour$)near2(agent$ or compound$)	7
☐	L21	L20 and l7	44
☐	L20	L19 and (l1 or l2)	165
☐	L19	atherogenic$	1573
	DB=USPT,DWPI; PLUR=YES; OP=OR		
☐	L18	L17 and (combin$).clm.	44
☐	L17	(method$).clm. and l15	120
☐	L16	L15 and l9	0
☐	L15	L1 and l2	146
☐	L14	L13 and l11	1
☐	L13	(carboplatin$).clm.	139
☐	L12	(caroplatin$).clm.	0
☐	L11	(Probucol).clm.	75
☐	L10	L9	46
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
☐	L9	(probucol$ and carboplatin$)	108
☐	L8	L7 and l5	38
☐	L7	(probucol$ or carboplatin$)	4777
☐	L6	(probucol or carboplatin$)	4769

☐	L5	l1 and l2	352
☐	L4	(l1) near 10 (L2)	16826
☐	L3	l1 near 10 L2	16826
☐	L2	(cancer$ or carcinoma$ or neoplasm$ or antineoplas$ or chemotherap$).clm.	16699
☐	L1	(anti-oxid$ or antioxid$).clm.	12323

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☐	L8	L7 and carboplatin$	10
☐	L7	(antioxidant$ or anti-oxidant$).clm.	8830
☐	L6	(carboplatin$)near55(antioxidant$)	0
☐	L5	(carboplatin$)near25(antioxidant$)	0
☐	L4	(carboplatin$)near5(antioxidant$)	0
☐	L3	L2 and antioxidant$	1
☐	L2	(5763429).pn.	1
☐	L1	carboplatin$ and antioxidant$	292

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